

CLAIMS

1. An apparatus (1) for measuring a small quantity
5 of a liquid, for example, in connection with a medical diagnostic test, comprising at least one chamber (2) for receiving the liquid, which chamber (2) comprises a bottom (3) and upright side walls (4) and at least two electrodes (5) to connect to a voltage source and a measuring system
10 for determining the electrical impedance between the electrodes, **characterized** in that the electrodes are substantially incorporated in the bottom (3) of the chamber (2), allowing the electrical impedance of the liquid itself to be determined.

15 2. An apparatus according to claim 1, **characterized** in that the bottom (3) of the chamber (2) is substantially formed by a glass substrate (9).

3. An apparatus according to claim 2, **characterized** in that the electrodes (5) are provided on the glass
20 substrate (9), and are embedded in an insulation layer (10) provided on the glass substrate (9).

4. An apparatus according to any one of the claims 1-3, **characterized** in that the upright side walls (4) are formed by etching insulation material provided on the insulation layer (10).
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5. An apparatus according to claim 1, **characterized** in that the bottom (3) of the chamber (2) is substantially formed by a silicon wafer (6).

30 6. An apparatus according to claim 5, **characterized** in that the silicon wafer (6) is provided with a first insulation layer (7), preferably of SiO_2 .

7. An apparatus according to any one of the claims 4-6, **characterized** in that the electrodes (5) are provided on the first insulation layer (7) of the silicon wafer (6)
35 and are embedded in a second insulation layer (8), preferably Si_xN_y , which is provided on the first insulation layer (7).

8. An apparatus according to any one of the claims 4-7, **characterized** in that the upright side walls (4) are formed by etching insulation material provided on the second insulation layer (8).

5 9. An apparatus according to one of the preceding claims, **characterized** in that the chamber (2) is equipped to receive liquid up to an amount of maximally 2 nanolitres.

10 10. An apparatus according to any one of the claims 1-9, **characterized** in that the same comprises a plurality of chambers (2) arranged in an array.

15 11. A method for measuring a quantity of liquid using an apparatus according to one of the preceding claims, **characterized** in that the voltage source is an alternating voltage source having a frequency of at least approximately 15 kHz.